

of the lifeboat in its unattended stowed position. If the means provided to secure the lifeboat cannot be released from inside the lifeboat, the means to secure the lifeboat must be arranged to preclude boarding the lifeboat without first releasing it.

(d) Each free-fall launching arrangement must be provided with a secondary means to launch the lifeboat by falls. Such means must comply with the requirements of §§ 199.150, 199.153, and 199.155. Notwithstanding § 199.150(c), the secondary launching appliance must be capable of launching the lifeboat against unfavorable conditions of trim of 2 degrees either way and of list of 5 degrees either way. The secondary launching appliance need not comply with the speed requirements of §§ 199.153 (g), (h), and (i). If the secondary launching appliance is not dependent on gravity, stored mechanical power, or other manual means, the launching arrangement must be connected both to the vessel's main and emergency power supplies.

§ 199.160 Rescue boat embarkation, launching and recovery arrangements.

(a) Each rescue boat must be capable of being launched with the vessel making headway of 5 knots in calm water. A painter may be used to meet this requirement.

(b) Each rescue boat embarkation and launching arrangement must permit the rescue boat to be boarded and launched in the shortest possible time.

(c) The rescue boat must meet the embarkation and launching arrangement requirements of §§ 199.110 (e) and (g), 199.150, 199.155, and if the launching arrangement uses falls and a winch, § 199.153.

(d) If the rescue boat is one of the vessel's survival craft, the rescue boat must also meet the following requirements:

(1) The rescue boat must meet the muster and embarkation arrangement requirements of § 199.110 and the launching station requirements of § 199.120.

(2) If the launching arrangement uses a single fall, the rescue boat may have an automatic disengaging apparatus approved under approval series 160.170

instead of a lifeboat release mechanism.

(e) Rapid recovery of the rescue boat must be possible when loaded with its full complement of persons and equipment. If the rescue boat is also a lifeboat, rapid recovery must be possible when loaded with its lifeboat equipment and an approved rescue boat complement of at least six persons.

(f) Each rescue boat launching appliance must be fitted with a powered winch motor.

(g) Each rescue boat launching appliance must be capable of hoisting the rescue boat when loaded with its full rescue boat complement of persons and equipment at a rate of not less than 0.3 meters per second (59 feet per minute).

§ 199.170 Line-throwing appliance.

(a) *General.* Each vessel must have a line-throwing appliance approved under approval series 160.040.

(b) *Stowage.* The line-throwing appliance and its equipment must be readily accessible for use.

(c) *Additional equipment.* Each vessel must carry the following equipment for the line-throwing appliance—

(1) The equipment on the list provided by the manufacturer with the approved appliance; and

(2) An auxiliary line that—

(i) Is at least 450 meters (1,500 feet) long;

(ii) Has a breaking strength of at least 40 kiloNewtons (9,000 pounds-force); and

(iii) Is, if synthetic, of a dark color or certified by the manufacturer to be resistant to deterioration from ultraviolet light.

§ 199.175 Survival craft and rescue boat equipment.

(a) All lifeboat and rescue boat equipment—

(1) Must be secured within the boat by lashings, by storage in lockers or compartments, by storage in brackets or similar mounting arrangements, or by other suitable means;

(2) Must be secured in such a manner as not to interfere with any abandonment procedures or reduce seating capacity;

(3) Must be as small and of as little mass as possible;

(4) Must be packed in a suitable and compact form; and

(5) Should be stowed so the items do not—

- (i) Reduce the seating capacity;
- (ii) Adversely affect the seaworthiness of the survival craft or rescue boat; or
- (iii) Overload the launching appliance.

(b) Each lifeboat, rigid liferaft, and rescue boat, unless otherwise stated in this paragraph, must carry the equipment listed in this paragraph and specified for it in table 199.175 of this section under the vessel's category of service. A lifeboat that is also a rescue boat must carry the equipment in the table column marked for a lifeboat.

(1) *Bailer*. The bailer must be buoyant.

(2) *Bilge pump*. The bilge pump must be approved under approval series 160.044 and must be installed in a ready-to-use condition as follows:

- (i) The bilge pump for a lifeboat approved for less than 70 persons must be either size 2 or size 3.
- (ii) The bilge pump for a lifeboat approved for 70 persons or more must be size 3.

(3) *Boathook*. In the case of a boat launched by falls, the boathook must be kept free for fending-off purposes. For inflated rescue boats and for rigid-inflated rescue boats, each boathook must be designed to minimize the possibility of damage to the inflated portions of the hull.

(4) *Bucket*. The bucket must be made of corrosion-resistant material and should either be buoyant or have an attached lanyard at least 1.8 meters (6 feet) long.

(5) *Can opener*. A can opener may be in a jackknife approved under approval series 160.043.

(6) *Compass*. The compass and its mounting arrangement must be approved under approval series 160.014. In a totally enclosed lifeboat, the compass must be permanently fitted at the steering position; in any other boat it must be provided with a binnacle, if necessary to protect it from the weather, and with suitable mounting arrangements.

(7) *Dipper*. The dipper must be rust-proof and attached to a lanyard that

should be at least 0.9 meters (3 feet) long.

(8) *Drinking cup*. The drinking cup must be graduated and rustproof. The cup should also be of a breakage-resistant material.

(9) *Fire extinguisher*. The fire extinguisher must be approved under approval series 162.028. The fire extinguisher must be type B-C, size II, or larger. Two type B-C, size I fire extinguishers may be carried in place of a type B-C, size II fire extinguisher.

(10) *First aid kit*. The first aid kit in a lifeboat and in a rescue boat must be approved under approval series 160.041. The first aid kit in a rigid liferaft must be approved under approval series 160.054.

(11) *Fishing kit*. The fishing kit must be approved under approval series 160.061.

(12) *Flashlight*. The flashlight must be a type I or type III that is constructed and marked in accordance with the American Society of Testing and Materials (ASTM) F 1014 (incorporated by reference, see § 199.05). One spare set of batteries and one spare bulb, stored in a watertight container, must be provided for each flashlight.

(13) *Hatchet*. The hatchet must be approved under approval series 160.013. The hatchet should be stowed in brackets near the release mechanism and, if more than one hatchet is carried, the hatchets should be stowed at opposite ends of the boat.

(14) *Heaving line*. The heaving line must be buoyant, must be at least 30 meters (99 feet) long, must have a buoyant rescue quoit attached to one end, and should be at least 8 millimeters ($\frac{5}{16}$ inches) in diameter.

(15) *Instruction card*. The instruction card must be waterproof and contain the information required by IMO Resolution A.657(16). The instruction card should be located so that it can be easily seen upon entering the liferaft.

(16) *Jackknife*. The jackknife must be approved under approval series 160.043 and must be attached to the boat by its lanyard.

(17) *Knife*. The knife must be of the non-folding type with a buoyant handle as follows:

- (i) The knife for a rigid liferaft must be secured to the raft by a lanyard and

stowed in a pocket on the exterior of the canopy near the point where the painter is attached to the liferaft. If an approved jackknife is substituted for the second knife required on a liferaft equipped for 13 or more persons, the jackknife must also be secured to the liferaft by a lanyard.

(ii) The knife in an inflated or rigid-inflated rescue boat must be of a type designed to minimize the possibility of damage to the fabric portions of the hull.

(18) *Ladder*. The boarding ladder must be capable of being used at each entrance on either side or at the stern of the boat to enable persons in the water to board the boat. The lowest step of the ladder must be not less than 0.4 meters (15.75 inches) below the boat's light waterline.

(19) *Mirror*. The signalling mirror must be approved under approval series 160.020.

(20) *Oars and paddles*. Each lifeboat and rescue boat must have buoyant oars or paddles of the number, size, and type specified by the manufacturer of the boat. An oarlock or equivalent device, either permanently installed or attached to the boat by a lanyard or chain, must be provided for each oar. Each oar should have the vessel's name marked on it in block letters.

(21) *Painter*. (i) One painter on a lifeboat and the painter on a rescue boat must be attached by a painter release device at the forward end of the lifeboat. The second painter on a lifeboat must be secured at or near the bow of the lifeboat, ready for use. On lifeboats to be launched by free-fall launching, both painters must be stowed near the bow ready for use.

(A) If the painter is of synthetic material, the painter must be of a dark color or certified by the manufacturer to be resistant to deterioration from ultraviolet light.

(B) The painter for a lifeboat and each painter for a rescue boat must be of a length that is at least twice the distance from the stowage position of the boat to the waterline with the vessel in its lightest seagoing condition, or must be 15 meters (50 feet) long, whichever is the greater.

(C) The painter must have a breaking strength of at least 34 kiloNewtons (7,700 pounds-force).

(ii) The painter for a rigid liferaft must be of a length that is at least 20 meters (66 feet) plus the distance from the liferaft's stowed position to the waterline with the vessel in its lightest seagoing condition, or must be 15 meters (50 feet) long, whichever is the greater.

(A) If the painter is of synthetic material, the painter must be of a dark color or certified by the manufacturer to be resistant to deterioration from ultraviolet light.

(B) The painter must have a breaking strength of at least 15 kiloNewtons (3,370 pounds-force) for liferafts approved for more than 25 persons, of at least 20 kiloNewtons (2,250 pounds-force) for liferafts approved for 9 to 25 persons, and of at least 7.5 kiloNewtons (1,687 pounds-force) for any other liferaft.

(C) The painter must have a float-free link meeting the requirements of part 160, subpart 160.073 of this chapter secured to the end of the painter that is attached to the vessel. The float-free link arrangement must break under a load of 2.2 ± 0.4 kiloNewtons (400 to 536 pounds-force).

(22) *Provisions*. Each unit of provisions must be approved under approval series 160.046 and must provide at least 10,000 kiloJoules (2,390 calories). Individual provision packages may provide less than 10,000 kiloJoules, as long as the total quantity of provisions on board provides for at least 10,000 kiloJoules per person.

(23) *Pump*. The pump or bellows must be manually operated and should be arranged so it is capable of inflating any part of the inflatable structure of the rescue boat.

(24) *Radar reflector*. The radar reflector must be capable of detection at a distance of 4 nautical miles and must have a mounting arrangements to install it on the boat in its proper orientation. A 9-GigaHertz radar transponder may be substituted for the radar reflector if the transponder is accepted by the Federal Communications Commission as meeting the requirements of 47 CFR part 80 and is stowed in the boat or raft.

(25) *Rainwater collection device.* The rainwater collection device must be arranged to collect falling rain and direct it into the water tanks in the lifeboat. If the lifeboat carries a manually-powered, reverse osmosis desalinator approved under approval series 160.058, a rainwater collection device is not required.

(26) *Repair kit.* The repair kit for an inflated and a rigid-inflated rescue boat must be packed in a suitable container and include at least—

- (i) Six sealing clamps;
- (ii) Five 50-millimeter (2-inch) diameter tube patches;
- (iii) A roughing tool; and
- (iv) A container of cement compatible with the tube fabric. The cement must have an expiration date on its container that is not more than 24 months after the date of manufacture of the cement.

(27) *Sea anchor.* (i) The sea anchor for a lifeboat must be approved under approval series 160.019.

(ii) Each sea anchor for a rigid liferaft must be of the type specified by the liferaft manufacturer and must be fitted with a shock resistant hawser. It may also be fitted with a tripping line. One sea anchor must be permanently attached to the liferaft in such a way that, when the liferaft is waterborne, it will cause the liferaft to lie oriented to the wind in the most stable manner. The second sea anchor must be stowed in the liferaft as a spare. A davit-launched liferaft and a liferaft on a passenger vessel must have the permanently attached sea anchor arranged to deploy automatically when the liferaft floats free.

(iii) The sea anchor for a rescue boat must be of the type specified by the rescue boat manufacturer, and must have a hawser of adequate strength that is at least 10 meters (33 feet) long.

(28) *Searchlight.* (i) The searchlight must be of the type originally provided with the approved lifeboat or rescue boat, or must be certified by the searchlight manufacturer to meet ASTM F 1003 (incorporated by reference, see §199.05). The boat must carry two spare bulbs.

(ii) The searchlight must be permanently mounted on the canopy or must have a stanchion-type or collapsible-

type, portable mounting on the canopy. The mounting must be located to enable operation of the searchlight by the boat operator.

(iii) The searchlights power source must be capable of operating the light without charging or recharging for not less than—

(A) Three hours of continuous operation; or

(B) Six hours total operation when it is operated in cycles of 15 minutes on and 5 minutes off.

(iv) If the searchlight's power source is an engine starting battery, there must be sufficient battery capacity to start the engine at the end of either operating period specified in paragraph (b)(28)(iii) of this section.

(v) The searchlight's power source must be connected to the searchlight using watertight electrical fittings.

(29) *Seasickness kit.* The seasickness kit must be in a waterproof package and must include one waterproof seasickness bag, anti-seasickness medication sufficient for one person for 48 hours, and instructions for using the medication. Each seasickness kit should be stowed within reach of the seat for which it is intended.

(30) *Signal, smoke.* The smoke signal must be approved under approval series 160.122.

(31) *Signal, hand flare.* The hand flare must be approved under approval series 160.121.

(32) *Signal, rocket parachute flare.* The rocket parachute flare must be approved under approval series 160.136.

(33) *Skates and fenders.* The skates and fenders must be as specified by the lifeboat or rescue boat manufacturer to facilitate launching and prevent damage to a lifeboat intended for launching down the side of a vessel.

(34) *Sponge.* The sponge must be suitable for soaking up water.

(35) *Survival instructions.* The survival instructions must be as described in IMO Resolution A.657(16), Annex I for liferafts and Annex II for lifeboats.

(36) *Table of lifesaving signals.* The table of lifesaving signals must be as described in Annex IV to the International Regulations for Preventing Collisions at Sea 1972, as amended, and must be printed on a waterproof card or stored in a waterproof container.

(37) *Thermal protective aid.* The thermal protective aid must be approved under approval series 160.174.

(38) *Tool kit.* The tool kit must contain sufficient tools for minor adjustments to the engine and its accessories.

(39) *Towline.* The towline must be buoyant and at least 50 meters (164 feet) long. The towline must have a breaking strength of not less than 13.3 kiloNewtons (3,000 pounds-force) or be of sufficient strength to tow the largest liferaft carried on the vessel when loaded with its full complement of persons and equipment at a speed of at least 2 knots.

(40) *Water.* The water must be emergency drinking water approved under approval series 160.026.

(i) The requirement for up to one-third of the emergency drinking water may be met by a desalting apparatus approved under approval series 160.058 that is capable of producing the substituted amount of water in 2 days.

(ii) The requirement for up to two-thirds of the emergency drinking water may be met by a manually-powered, reverse osmosis desalinator approved under approval series 160.058 and that is capable of producing the substituted amount of water in 2 days.

(41) *Whistle.* The whistle must be corrosion-resistant, and should be a ball-type or multi-tone whistle that is attached to a lanyard.

TABLE 199.175—SURVIVAL CRAFT EQUIPMENT

Item No.	Item	International voyage			Short international voyage		
		Lifeboat	Rigid life-raft (SOLAS A pack)	Rescue boat	Lifeboat	Rigid life-raft (SOLAS B pack)	Rescue boat
1	Bailer ¹	1	1	1	1	1	1
2	Bilge pump ²	1	1	1	1	1	1
3	Boathook	2	1	1	2	1	1
4	Bucket ³	2	1	1	2	1	1
5	Can opener	3	3	3	3	3	3
6	Compass	1	1	1	1	1	1
7	Dipper	1	1	1	1	1	1
8	Drinking cup	1	1	1	1	1	1
9	Fire extinguisher	1	1	1	1	1	1
10	First aid kit	1	1	1	1	1	1
11	Fishing kit	1	1	1	1	1	1
12	Flashlight	1	1	1	1	1	1
13	Hatchet	2	2	2	2	2	2
14	Heaving line	2	1	2	2	1	2
15	Instruction card	1	1	1	1	1	1
16	Jackknife	1	1	1	1	1	1
17	Knife ^{1,4}	1	1	1	1	1	1
18	Ladder	1	1	1	1	1	1
19	Mirror, signalling	1	1	1	1	1	1
20	Oars, units ^{5,6}	1	1	1	1	1	1
	Paddles	2	2	2	2	2	2
21	Painter	2	1	1	2	1	1
22	Provisions (units per person)	1	1	1	1	1	1
23	Pump ⁷	1	1	1	1	1	1
24	Radar reflector	1	1	1	1	1	1
25	Rainwater collection device	1	1	1	1	1	1
26	Repair kit ⁷	1	1	1	1	1	1
27	Sea anchor	1	2	1	1	2	1
28	Searchlight	1	1	1	1	1	1
29	Seasickness kit (units per person)	1	1	1	1	1	1
30	Signal, smoke	2	2	2	2	2	2
31	Signal, hand flare	6	6	6	6	3	3
32	Signal, parachute flare	4	4	4	4	2	2
33	Skates and fenders ⁸	1	1	1	1	1	1
34	Sponge ⁷	2	2	2	2	2	2
35	Survival instructions	1	1	1	1	1	1
36	Table of lifesaving signals	1	1	1	1	1	1
37	Thermal protective aids ⁹	10%	10%	10%	10%	10%	10%
38	Tool kit	1	1	1	1	1	1
39	Towline ¹⁰	1	1	1	1	1	1
40	Water (liters per person)	3	1.5	3	3	1.5	3

TABLE 199.175—SURVIVAL CRAFT EQUIPMENT—Continued

Item No.	Item	International voyage			Short international voyage		
		Lifeboat	Rigid life-raft (SOLAS A pack)	Rescue boat	Lifeboat	Rigid life-raft (SOLAS B pack)	Rescue boat
41	Whistle	1	1	1	1	1	1

NOTES:

¹ Each liferaft equipped for 13 persons or more must carry two of these items.² Not required for boats of self-bailing design.³ Not required for inflated or rigid-inflated rescue boats.⁴ A hatchet counts towards this requirement in rigid rescue boats.⁵ Oars are not required on a free-fall lifeboat; a unit of oars means the number of oars specified by the boat manufacturer.⁶ Rescue boats may substitute buoyant paddles for oars, as specified by the manufacturer.⁷ Not required for a rigid rescue boat.⁸ Required if specified by the boat manufacturer.⁹ Sufficient thermal protective aids are required for at least 10% of the persons the survival craft is equipped to carry, but not less than two.¹⁰ Required only if the lifeboat is also the rescue boat.

[CGD 84-069, 61 FR 25313, May 20, 1996; 61 FR 40281, Aug. 1, 1996; 63 FR 52819, Oct. 1, 1998; USCG-1999-6216, 64 FR 53229, Oct. 1, 1999; USCG-2000-7790, 65 FR 58465, Sept. 29, 2000; USCG-2004-18884, 69 FR 58352, Sept. 30, 2004]

§ 199.176 Markings on lifesaving appliances.

(a) *Lifeboats and rescue boats.* Each lifeboat and rescue boat must be plainly marked as follows:

(1) Each side of each lifeboat and rescue boat bow must be marked in block capital letters and numbers with—

(i) The name of the vessel; and

(ii) The name of the port required to be marked on the stern of the vessel to meet the requirements of subpart 67.123 of this chapter.

(2) The number of persons for which the boat is equipped must be clearly marked, preferably on the bow, in permanent characters. The number of persons for which the boat is equipped must not exceed the number of persons shown on its nameplate.

(3) The number of the boat and a means of identifying the vessel to which the boat belongs, such as the vessel's name, must be plainly marked or painted so that the markings are visible from above the boat.

(4) The Type II retro-reflective material approved under approval series 164.018 must be placed on the boat to meet the arrangement requirements in IMO Resolution A.658(16).

(b) *Rigid liferafts.* Each rigid liferaft must be marked as follows:

(1) The name of the vessel must be marked on each rigid liferaft.

(2) The name of the port required to be marked on the stern of the vessel to

meet the requirements of § 67.123 of this chapter must be marked on each rigid liferaft.

(3) The rigid liferaft must be marked with the words "SOLAS A pack" or "SOLAS B pack", to reflect the pack inside.

(4) The length of the painter must be marked on each rigid liferaft.

(5) At each entrance of each rigid liferaft, the number of persons for which the rigid liferaft is equipped must be marked in letters and numbers at least 100 millimeters (4 inches) high and in a color contrasting to that of the liferaft. The number of persons for which the liferaft is equipped must not exceed the number of persons shown on its nameplate.

[CGD 84-69, 61 FR 52313, May 20, 1996, as amended at 63 FR 52819, Oct. 1, 1998]

§ 199.178 Marking of stowage locations.

(a) Containers, brackets, racks, and other similar stowage locations for lifesaving equipment must be marked with symbols in accordance with IMO Resolution A.760(18) indicating the device stowed in that location.

(b) If more than one device is stowed in a location, the number of devices stowed must be indicated.

(c) Survival craft should be numbered consecutively starting from the vessel's bow. Survival craft on the starboard side should be numbered with